

Fig. 1
Prior Art

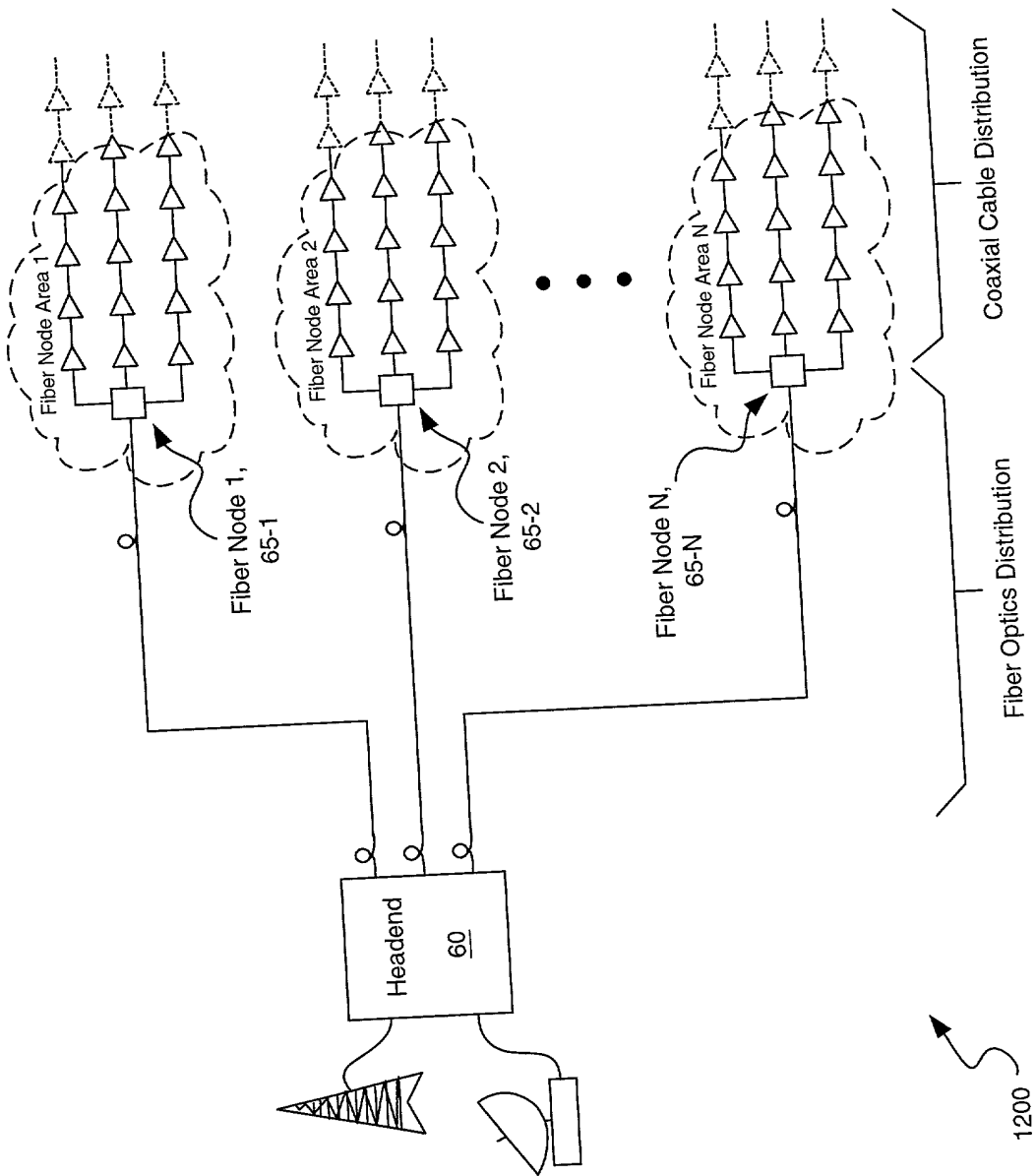
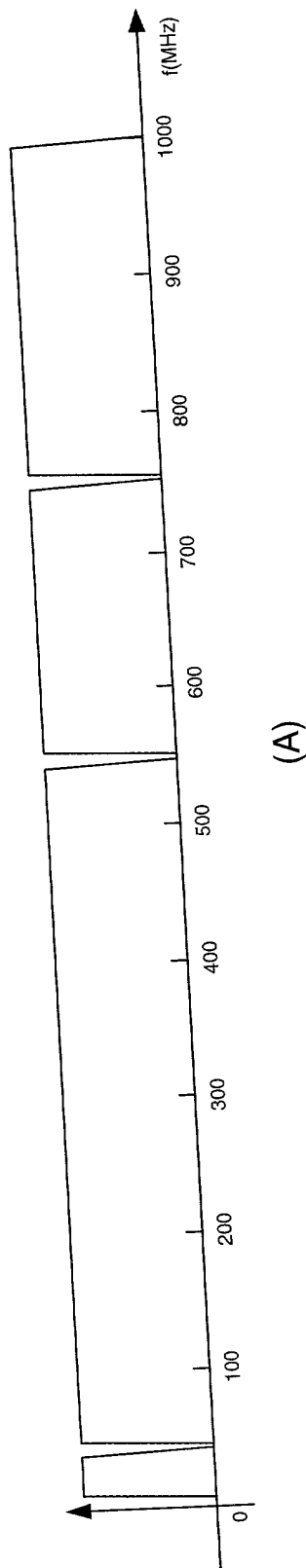


Fig. 2
Prior Art



Frequency Range (MHz) (approx.)	Direction	Primary Application
5 to 42	Upstream	Return path data, telephony, network management, pay-per-view billing
54 to 550	Downstream	Analog TV
550 to 750	Downstream	Digital TV, forward path data, telephony
750 to 1000	Upstream (and Downstream for 2-way)	Additional return path and Advanced 2-way Services

(B)

Fig. 3

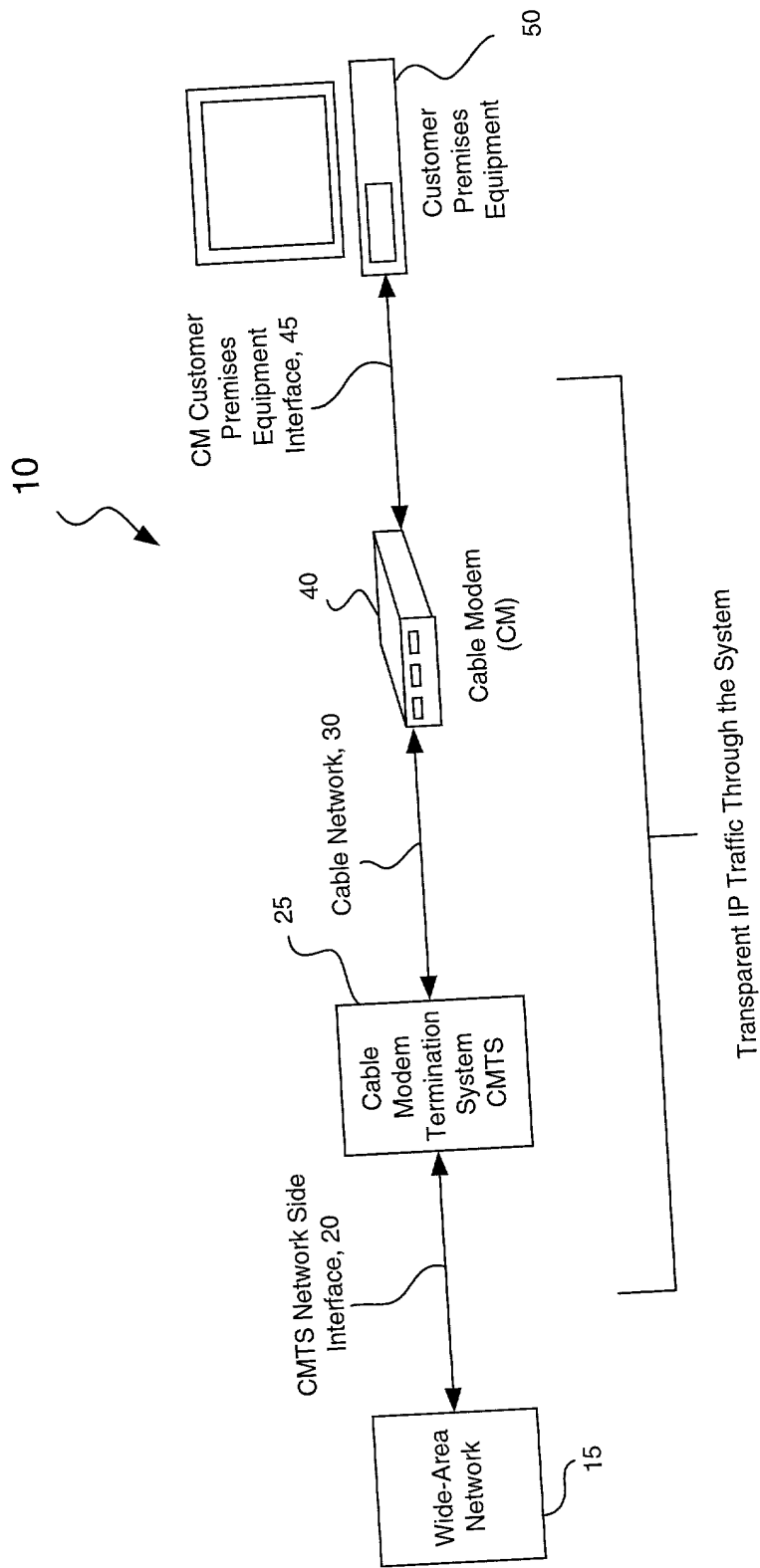


Fig. 4
Prior Art

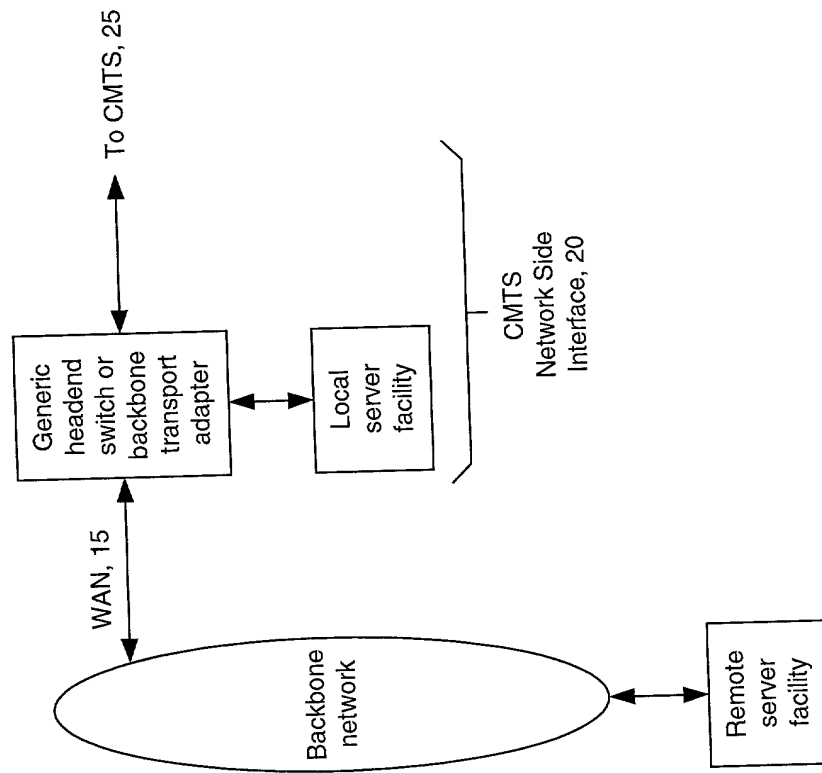


Fig. 5A
Prior Art

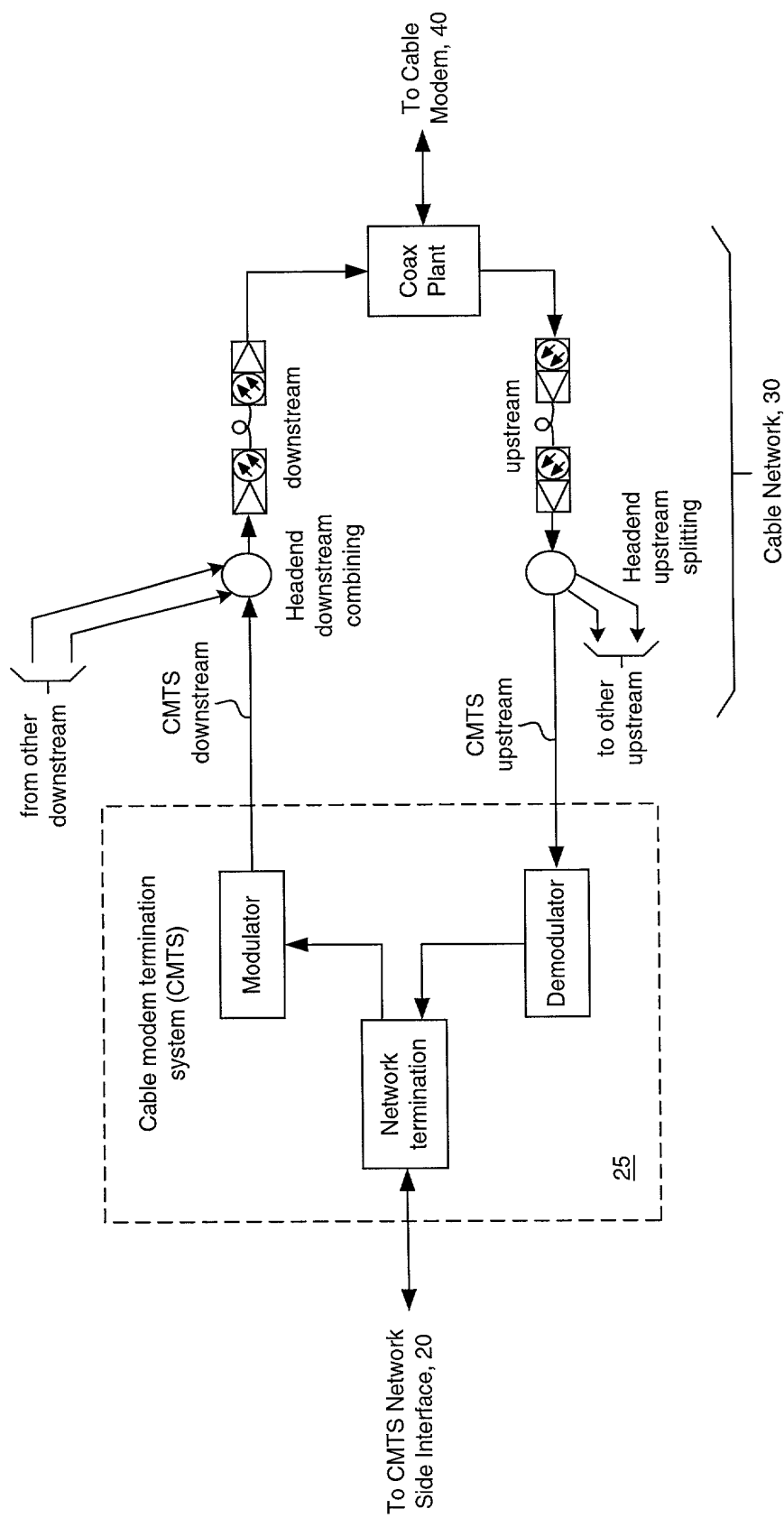


Fig. 5B
Prior Art

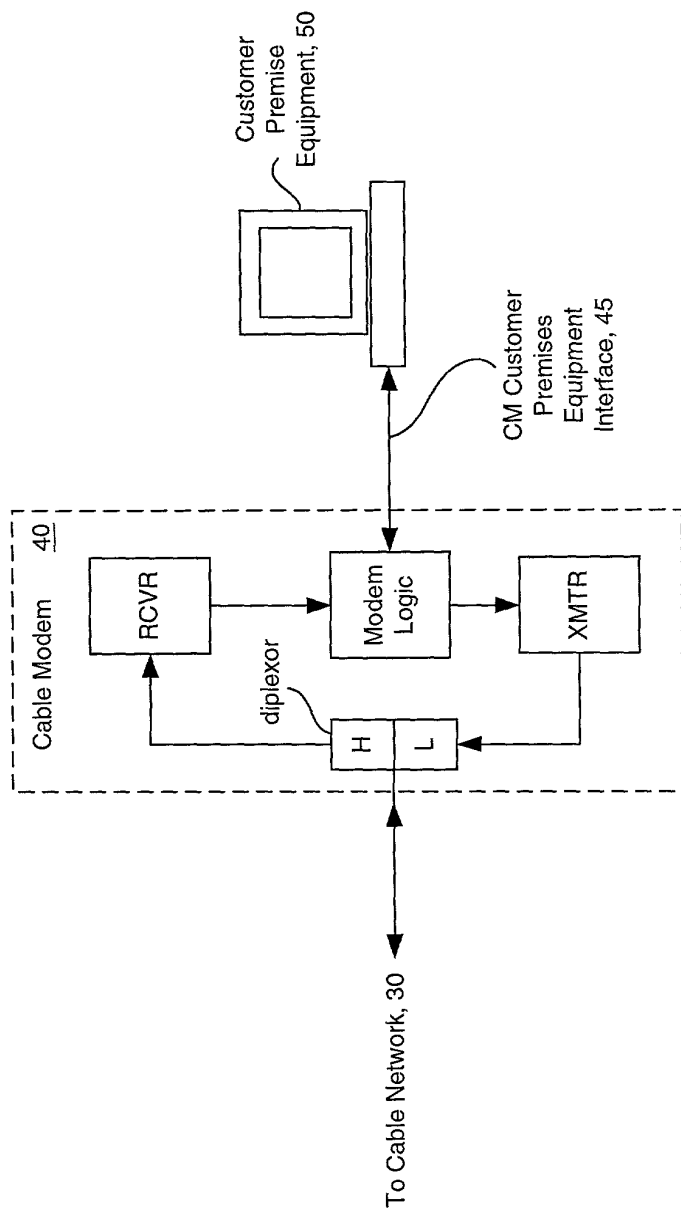


Fig. 5C
Prior Art

Legend for Connector Symbols

Symbol	Connector Type
\odot	Downstream
\otimes	Upstream

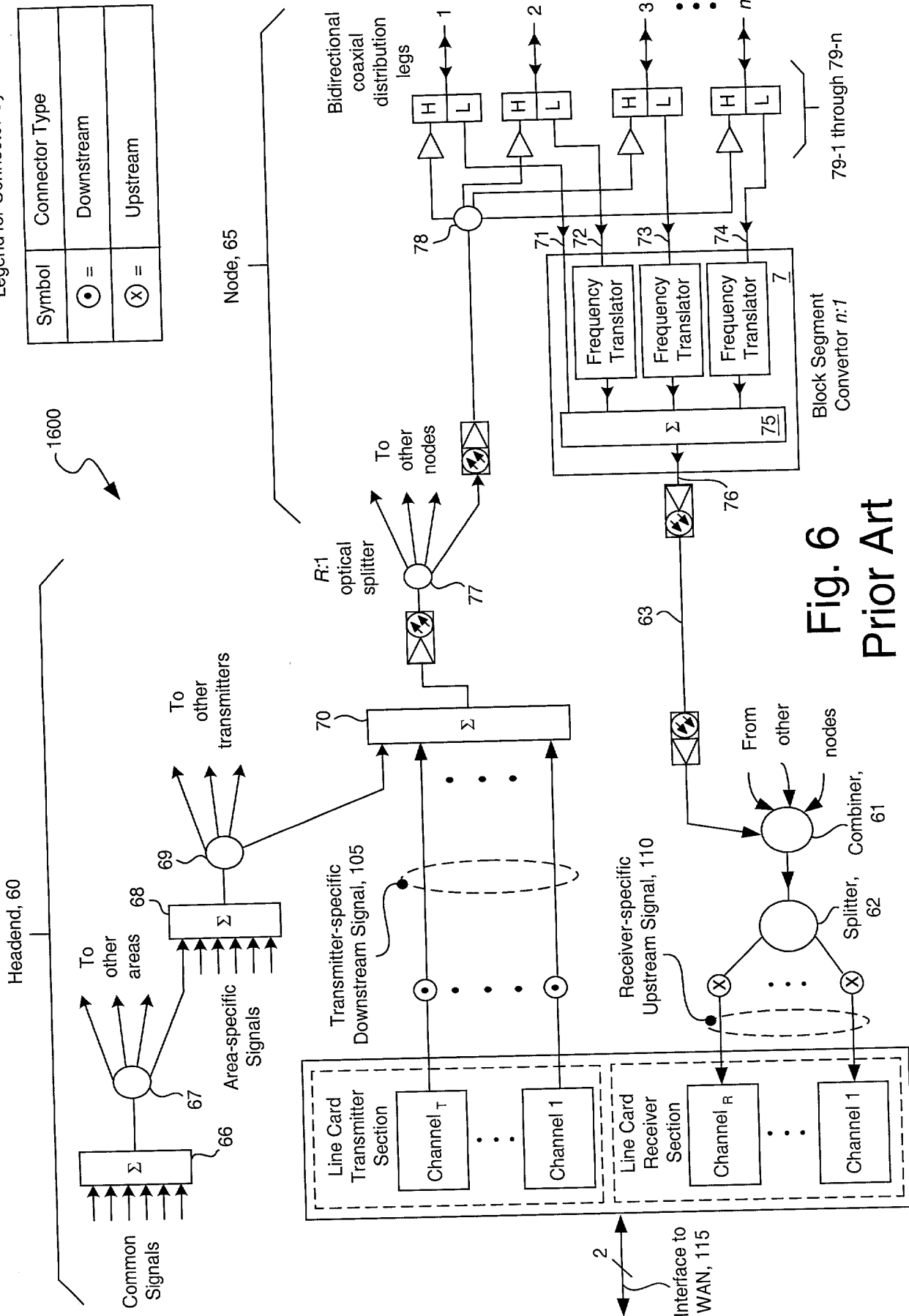


Fig. 6
Prior Art

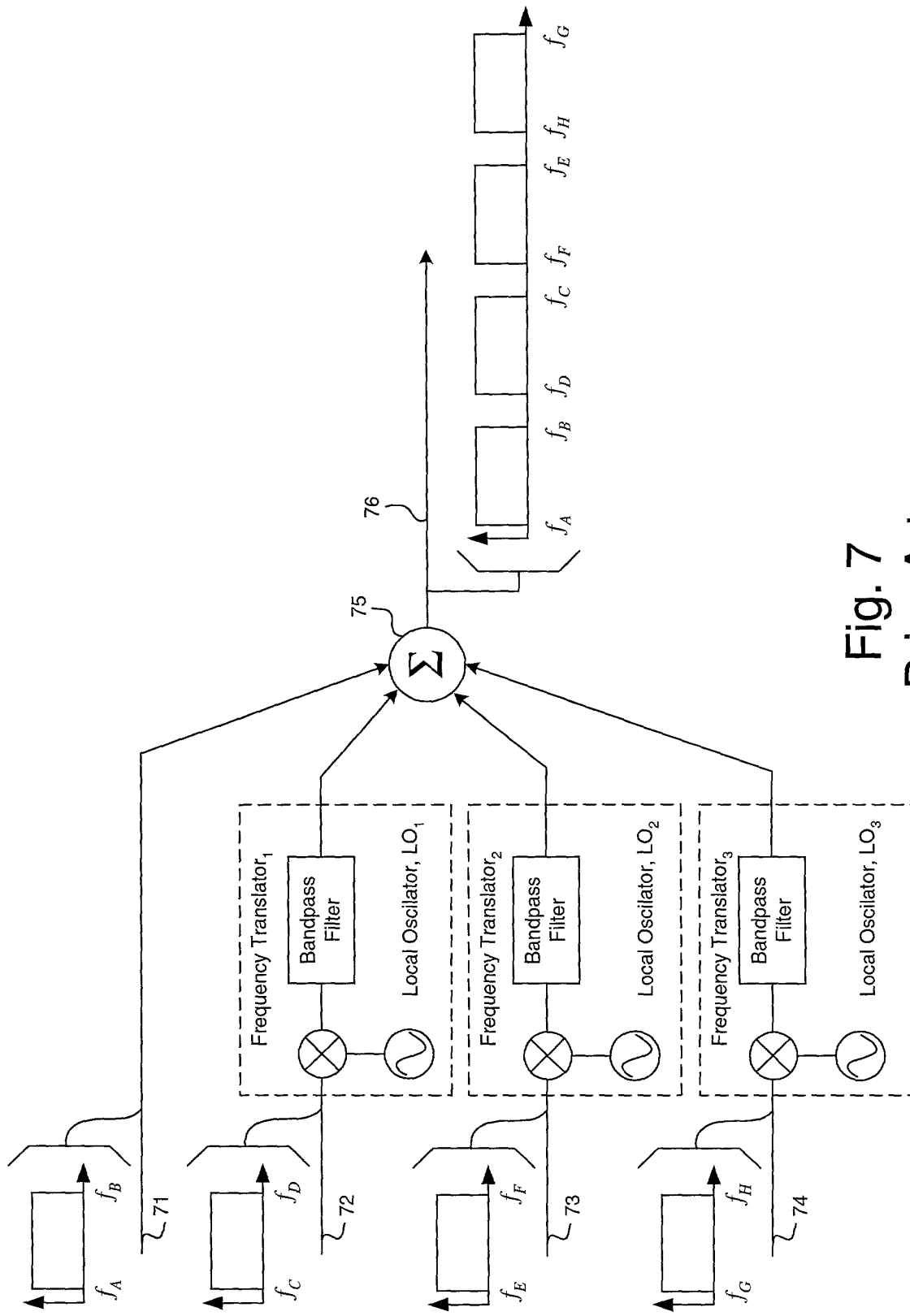


Fig. 7
Prior Art

Legend for Connector Symbols

Symbol	Connector Type
$\odot =$	Downstream
$\otimes =$	Upstream

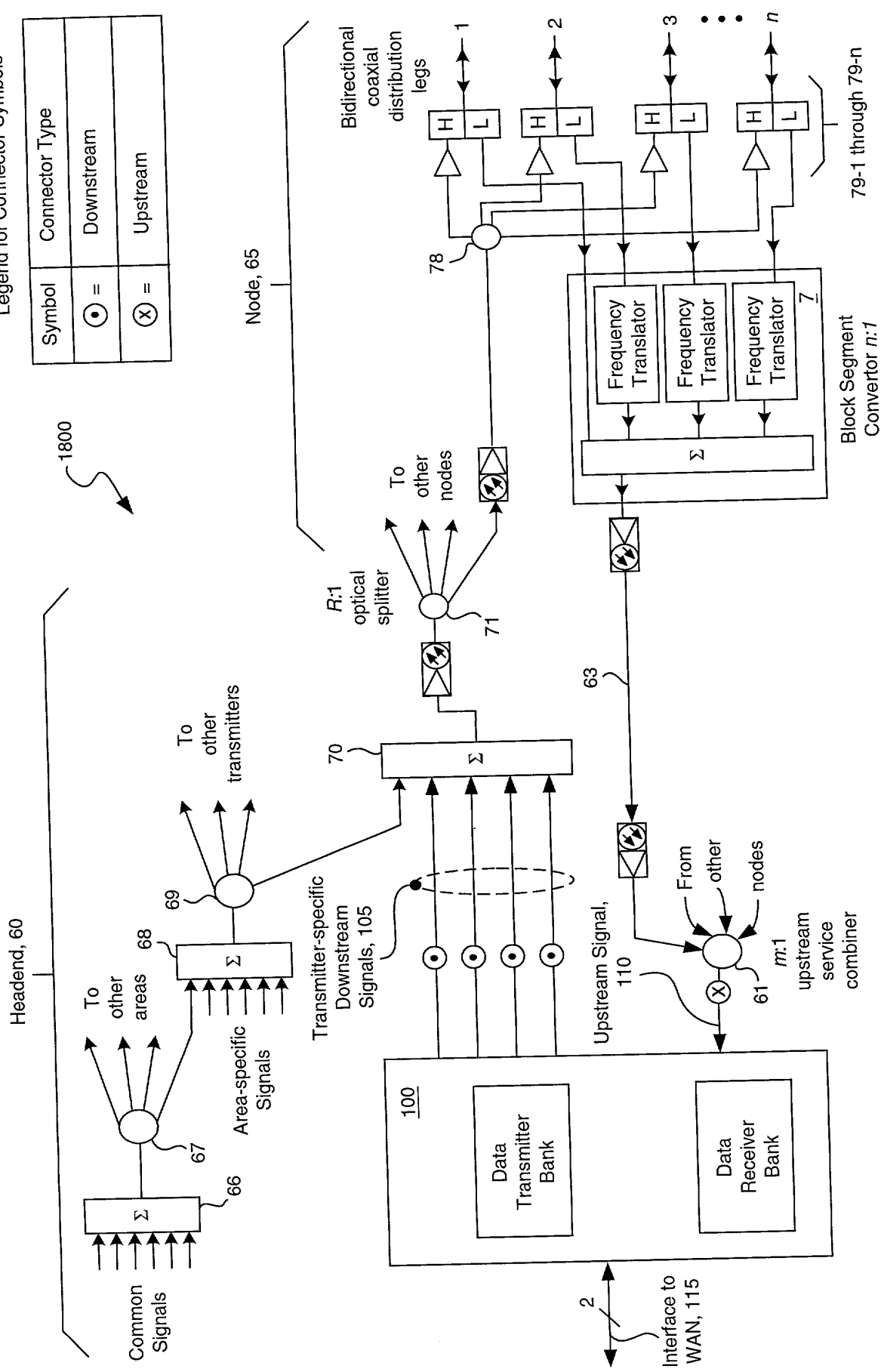
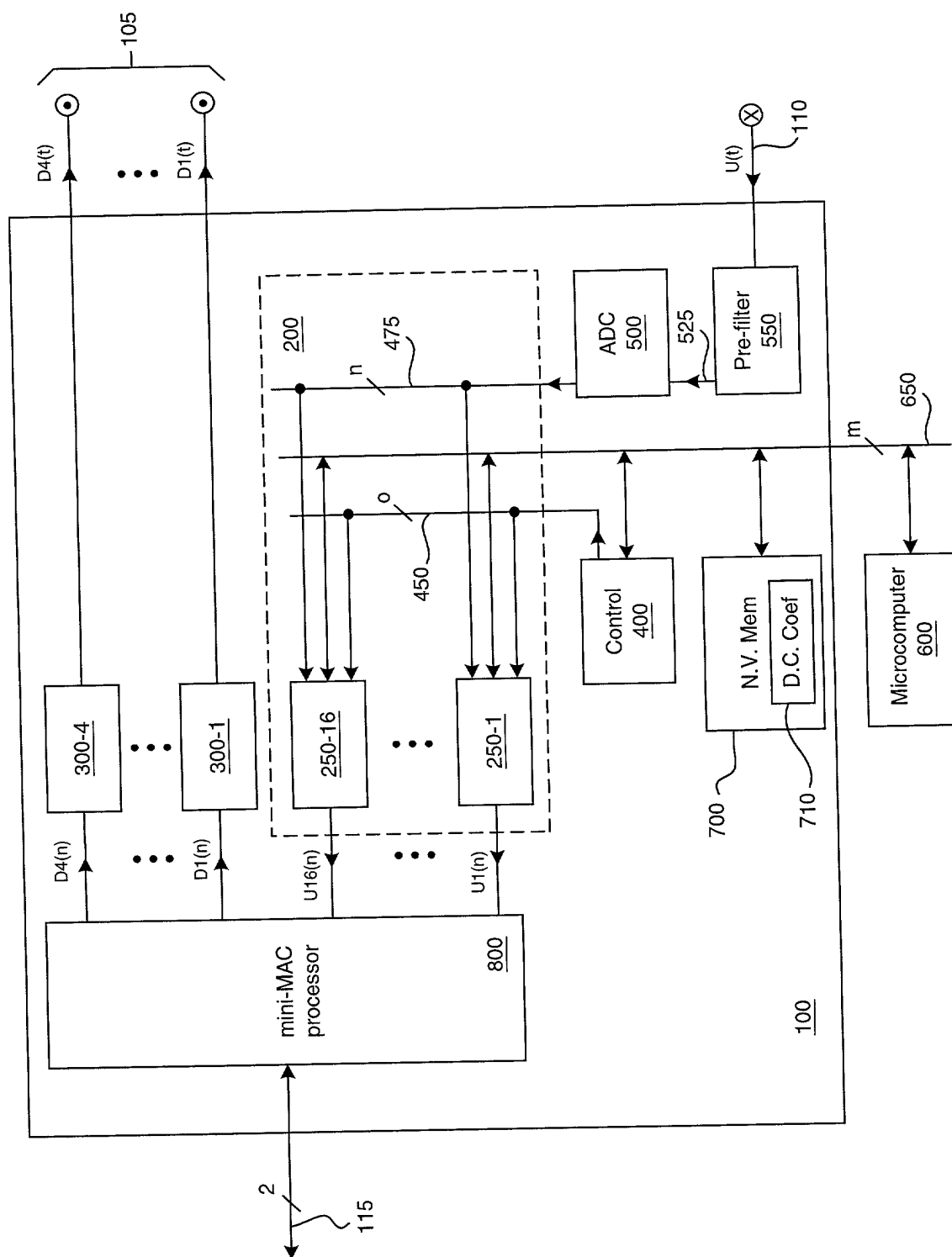


Fig. 8



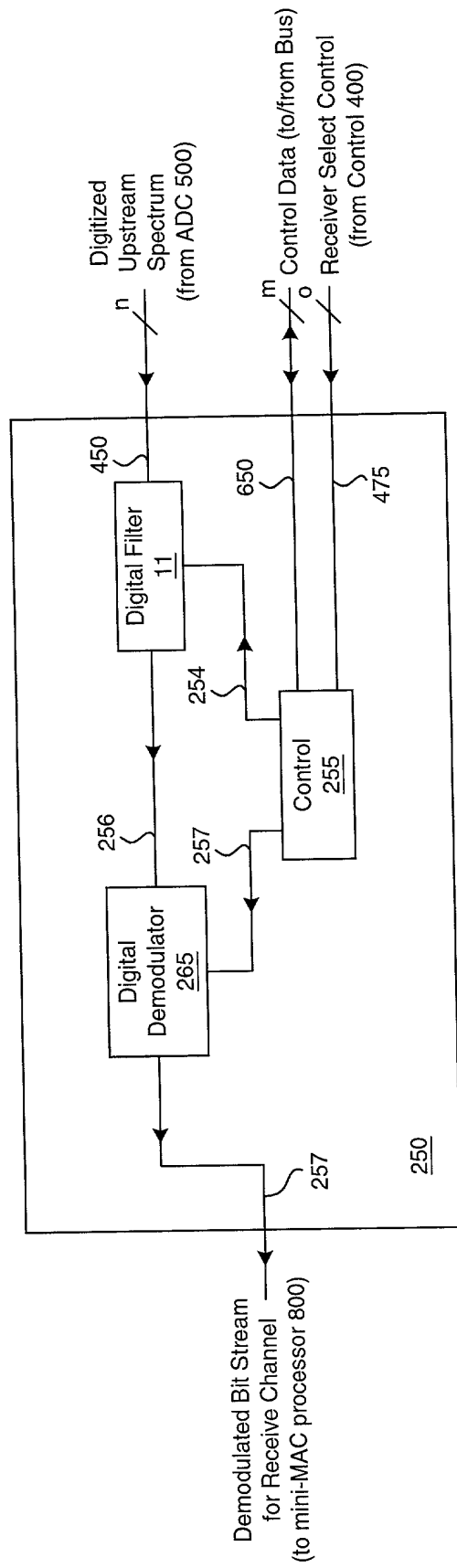


Fig. 10

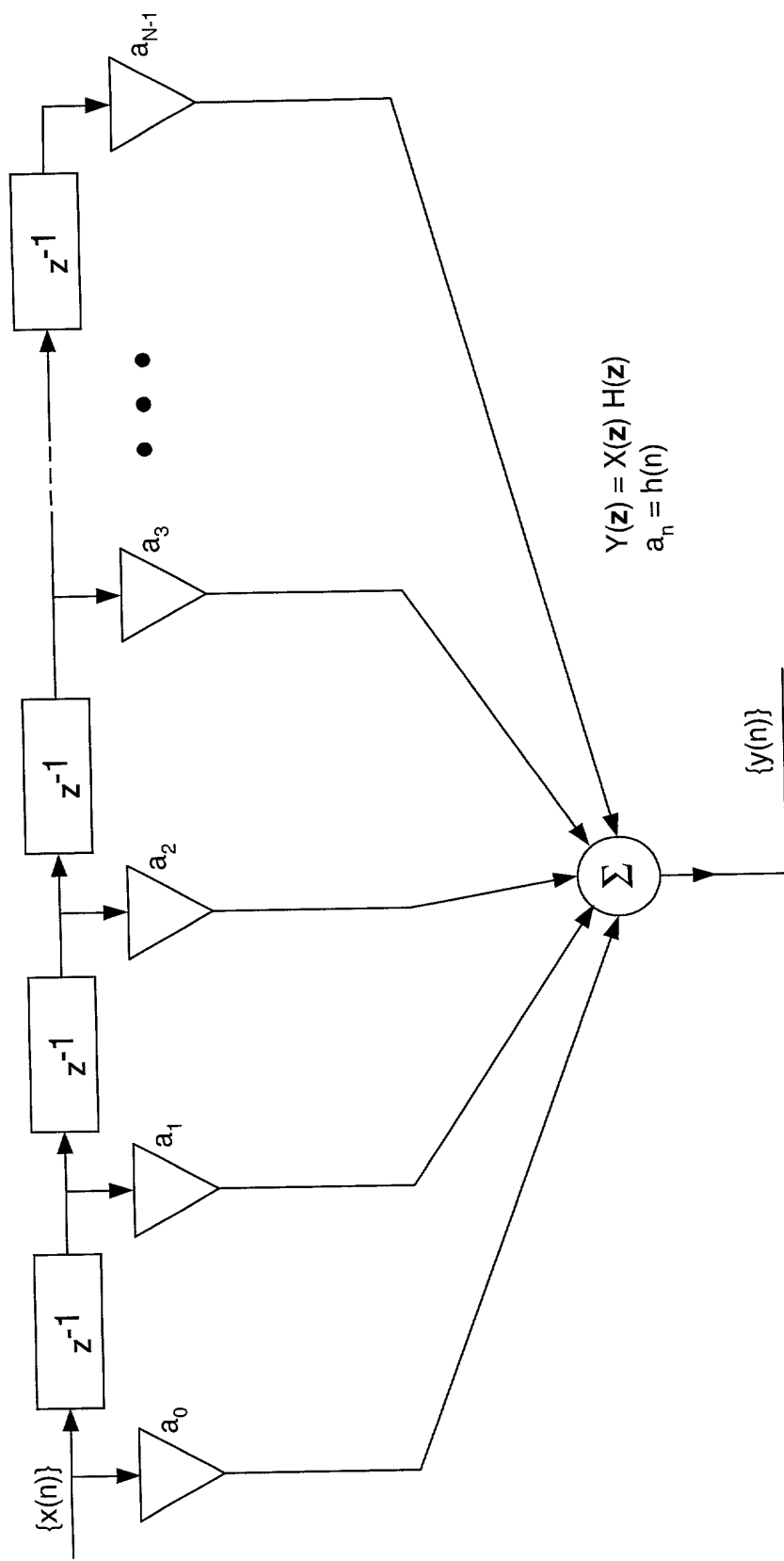


Fig. 11
Prior Art

Bandwidth	Symbol Rate ksymbols/second	Bit Rate Using QPSK	Bit Rate Using AQM-16
200 kHz	160	320 Kbps	640 Kbps
400 kHz	320	640 Kbps	1.28 Mbps
800 kHz	640	1.28 Mbps	2.56 Mbps
1.6 MHz	1280	2.56 Mbps	5.12 Mbps
3.2 MHz	2560	5.12 Mbps	10.24 Mbps

Fig. 12

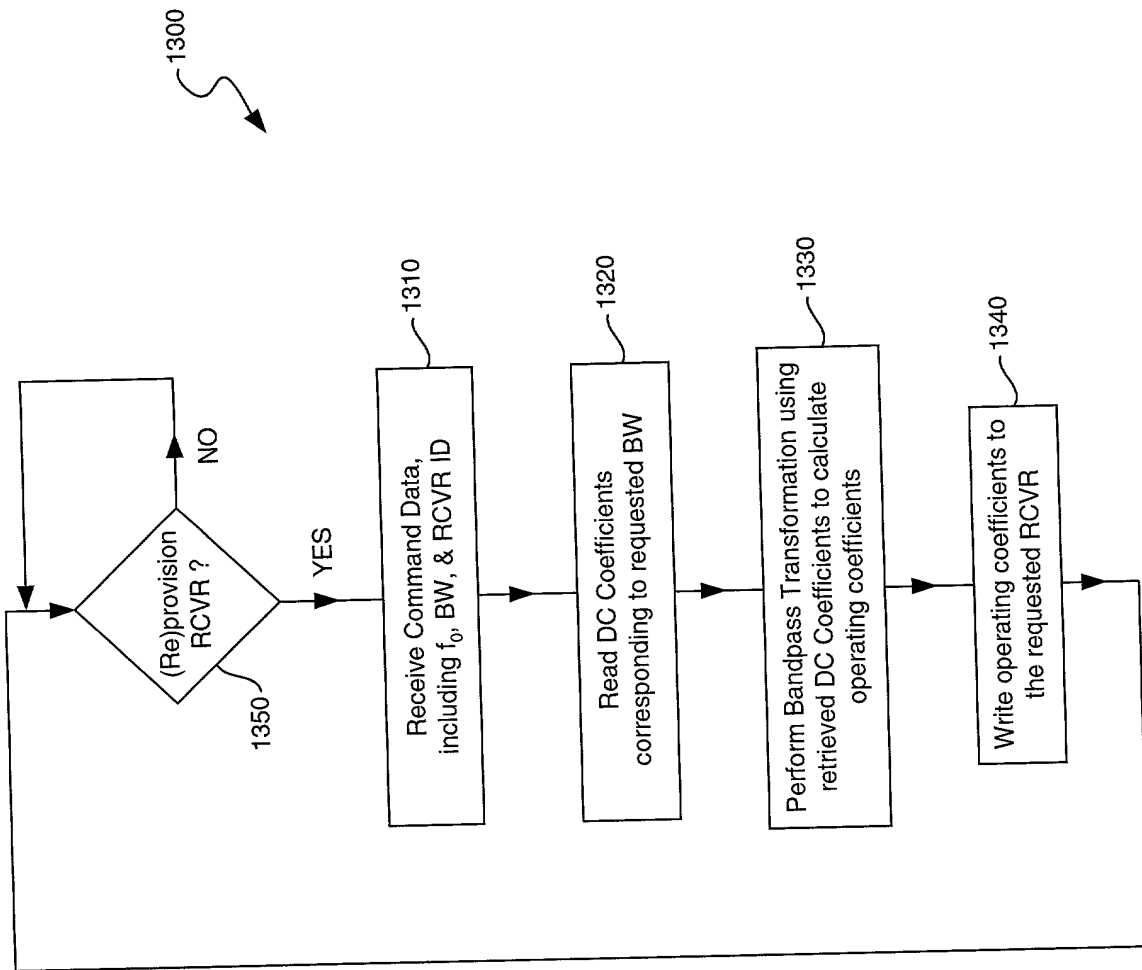


Fig. 13

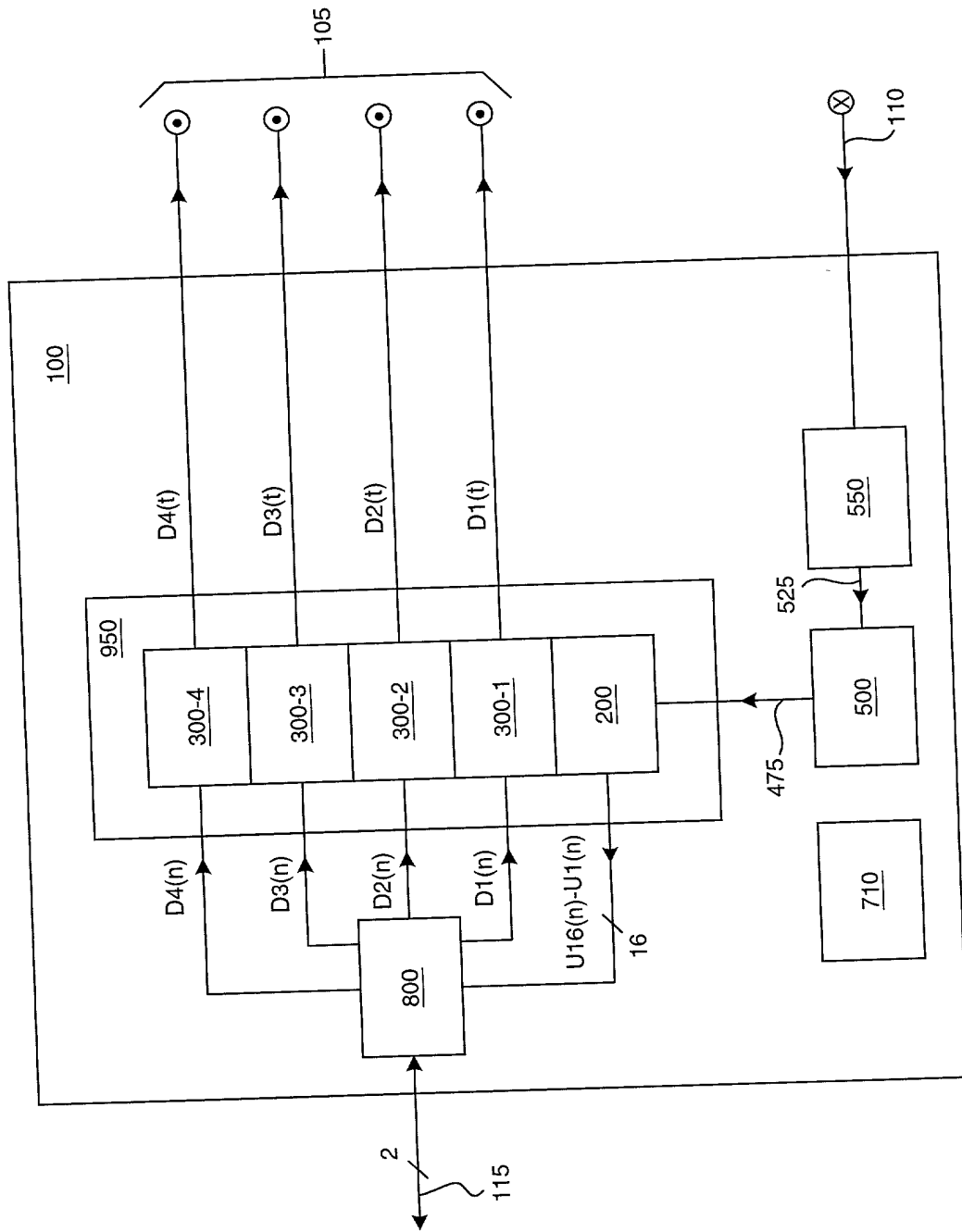


Fig. 14

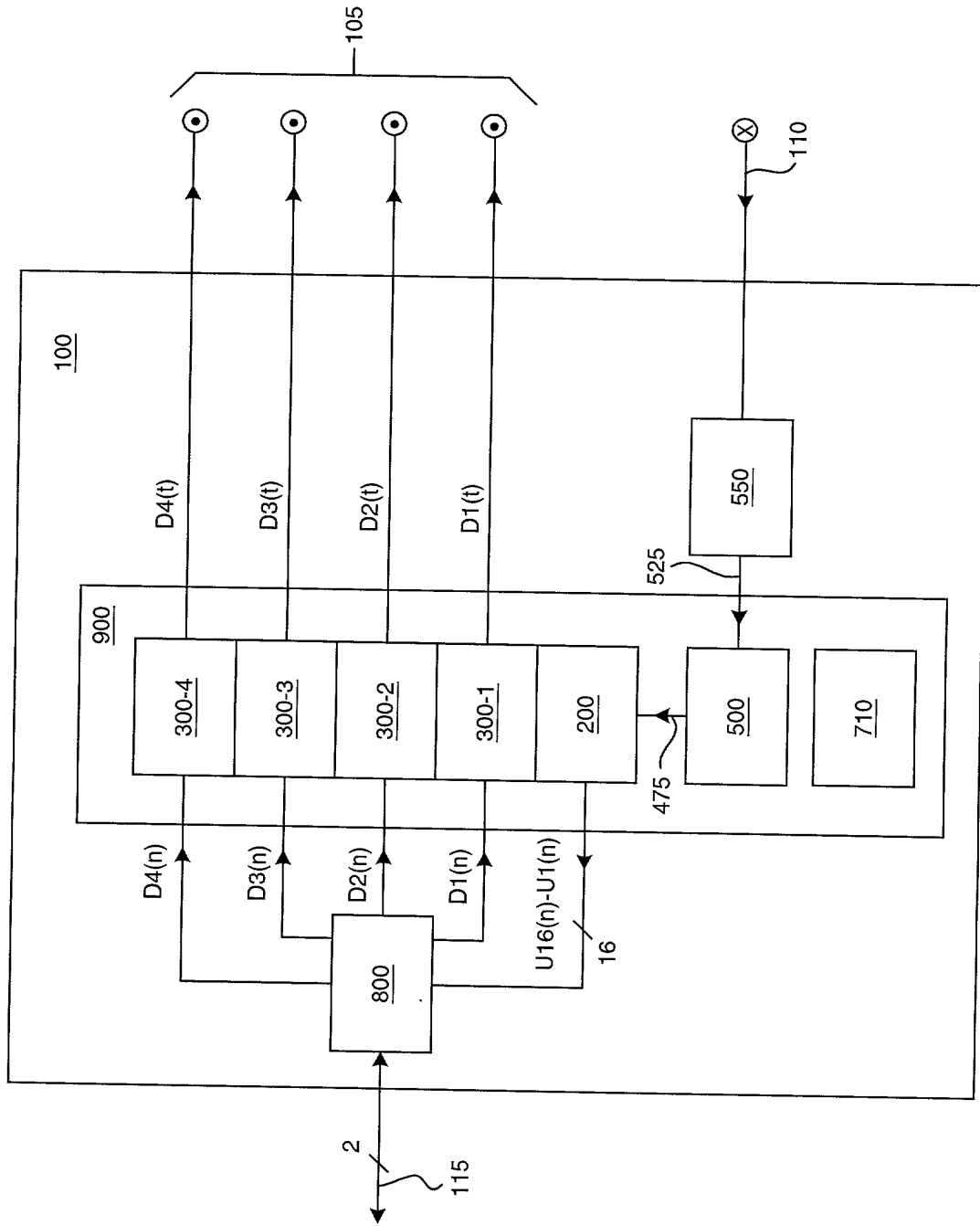


Fig. 15

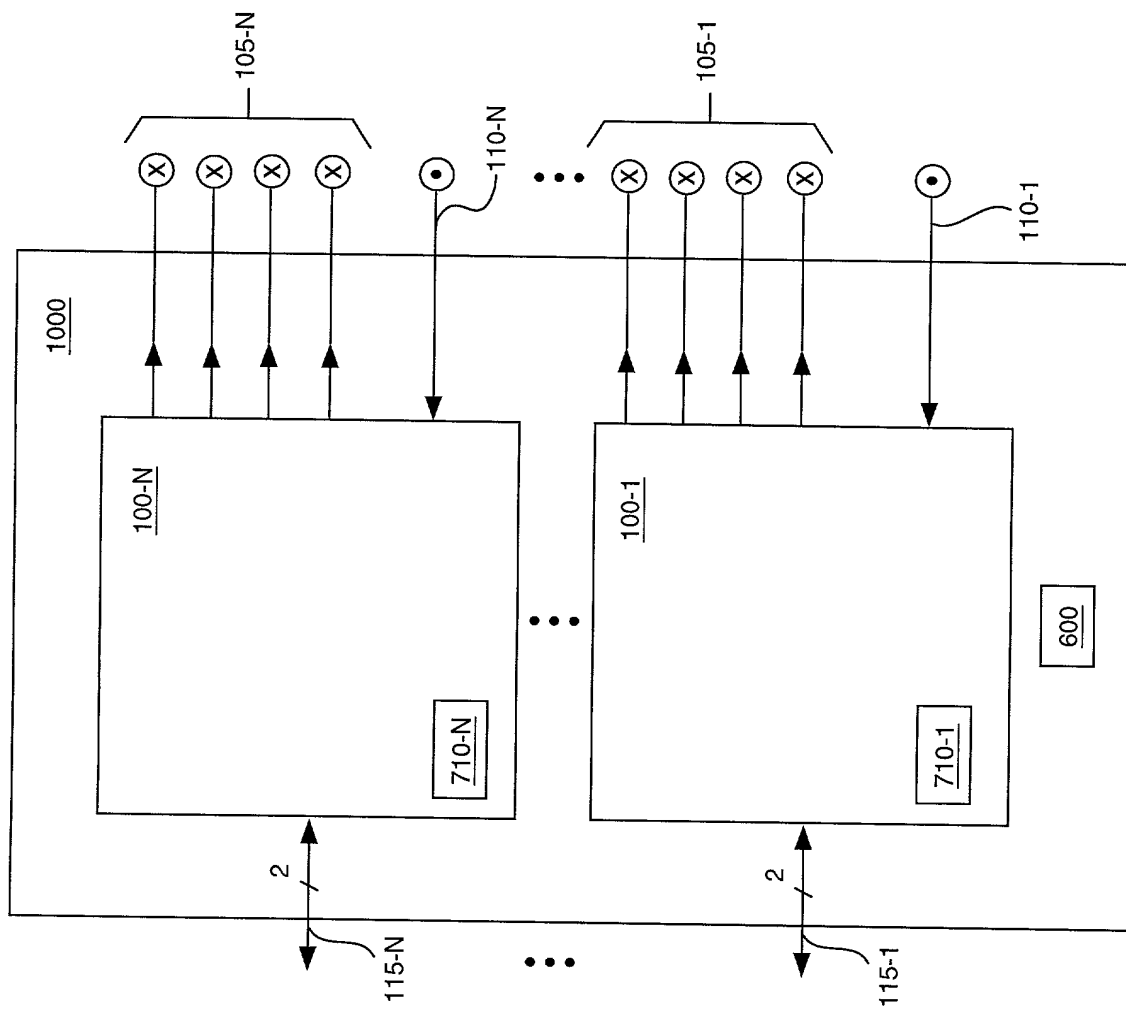
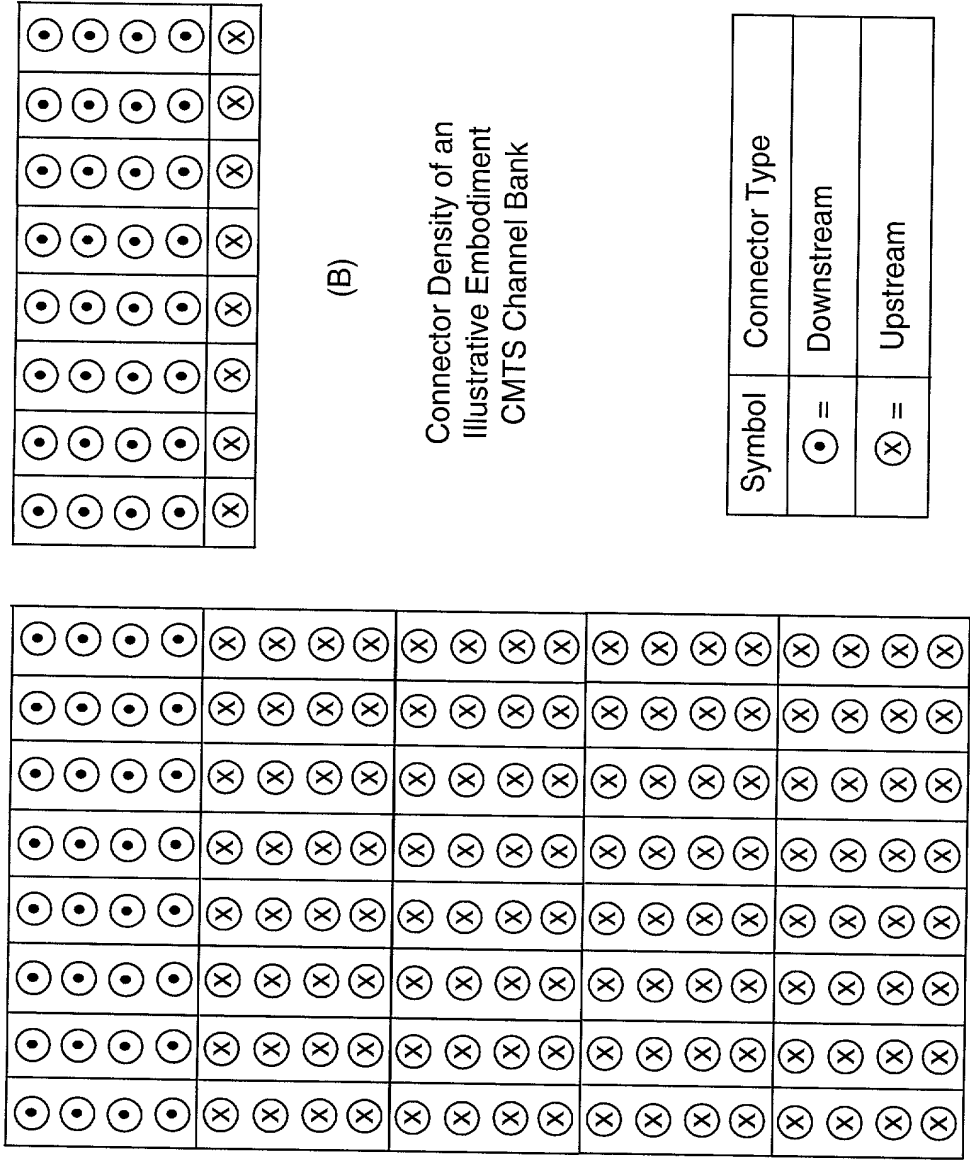


Fig. 16



Connector Density of a
Prior Art CMTS
Channel Bank

Fig. 17

Line Card Channel Configuration (DWN x UP)	Number of Channels Handled by Line Card	Line Card Connector Count Required by Prior Art	Line Card Connector Count of an Illustrative Embodiment
4 x 16	20	20	5
8 x 32	40	40	10
16 x 64	80	80	20
32 x 128	160	160	40

Fig. 18

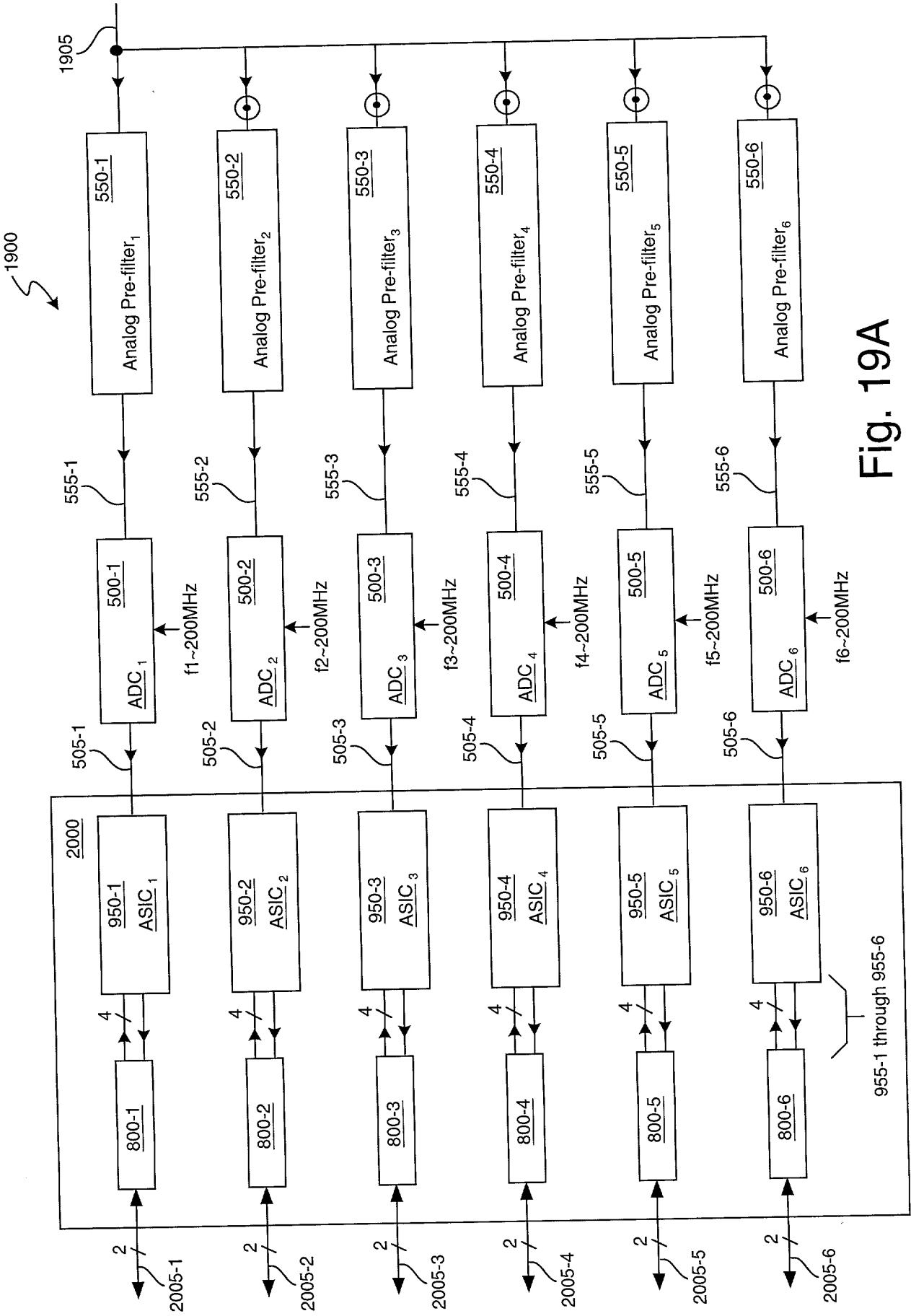


Fig. 19A

Sub-band within 750 - 1000 MHz	Analog Pre-Filter Bandpass (MHz)
1	750 - 790
2	790 - 830
3	830 - 870
4	870 - 910
5	910 - 950
6	950 - 990

Fig. 19B